REMARKS

Reconsideration of this Application is respectfully requested. Claims 24 to 39 are pending in the application, with claims 24 and 32 as the independent claims.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and further request that they be withdrawn.

I. Information Disclosure Statement

Applicants note that Information Disclosure Statement (IDS) documents AM1-AP1, listed on page 1 of the IDS filed on February 25, 2004, have not been initialed by the Examiner. Applicants respectfully request consideration of these documents and notation of same on the record.

II. Rejections Under 35 U.S.C. § 112, First Paragraph – Enablement

Claims 33-39 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly not being enabled for failing to comply with the deposit requirements. Paper No. 20070103, pp. 2-4; 37 C.F.R. § 1.801-1.809. Applicants respectfully traverse the rejection.

Applicants note that the specification contains, at page 7, paragraph 0022, the ATCC deposit number, the date of deposit, and the name and address of the depository.

In addition, Applicants submit herewith a Statement Concerning the ATCC Deposit, which states that ATCC Deposit 97756 was deposited under the terms of the Budapest Treaty, and that all restrictions on the availability to the public of the deposit will be irrevocably removed upon the grant of a patent based on the instant application, except as permitted under 37 C.F.R. § 1.808(b).

In view of this statement and the information in the specification, this application is now in compliance with the deposit requirements. Accordingly, it is respectfully requested that this ground of rejection be reconsidered and withdrawn.

III. Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 32 and 34-39 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for reciting the term "mature." Paper No. 20070103, p. 4. Applicants respectfully disagree with this rejection as one skilled in the art of molecular biology and genome sequencing would clearly understand what is meant by the term "mature" protein. Further, the term is defined clearly in the specification, at paragraphs 0026-0028, beginning at page 8. Accordingly, it is respectfully requested that this ground of rejection be reconsidered and withdrawn.

IV. Rejections Under 35 U.S.C. § 101

Claims 24-39 were rejected under 35 U.S.C. § 101, because, in the Examiner's view, the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. Paper No. 20070103, p. 5. Applicants respectfully traverse the rejection.

The Examiner contends that "[t]here is no description of the chemical, physical, or biological properties for the protein other than the sequence" and that "[t]he disclosed utilities associated with the claimed protein are based upon its homology with CTGF-1." *Id.* at p. 5. Applicants respectfully disagree with the Examiner's assertion that Applicants have not disclosed any properties for the protein other than the sequence. Applicants direct the Examiner's attention to the present specification, at, *e.g.*, pages 63-64 where CTGF-3 expression data is presented. Further, page 6, paragraphs 0020-0021 in conjunction with Figures 2 and 3, present comparative analysis with CTGF-1 (Figure 2), as well as an analysis of the CTGF-3 structure in terms of antigenic regions, alpha, beta, turn, and coil regions, amphipathic regions, flexible regions, and hydrophilicity and hydrophobicity regions (Figure 3). Clearly, Applicants have characterized CTGF-3 beyond its nucleotide and amino acid sequence.

Regarding the issue of homology with CTGF-1, the Examiner states that Henikoff *et al., Science 278*:609-614 (1997) (IDS Document AT3) "teaches that shared modules in proteins are to be used as guides for further research" and "expresses uncertainty about gene classification and family relationships are complex; computer-based tools may not be the solution." Paper No. 20070103, pp. 6-7 (citations omitted).

With respect to the issue of using amino acid homology as a predictor of protein function, Applicants respectfully disagree with the Examiner's interpretation of Henikoff *et al.* The passages cited by the Examiner relate to the potential difficulties in creating taxonomical classifications of gene family members but do not refute the contention that members within a given gene family (based on amino acid sequence homology) tend to have homologous functions.

The Examiner also states that "Grotendorst does not ascribe a biological role, function or activity based on the structural relatedness" of members of the CCN family. Paper No. 20070103, p. 5. Applicants note that *even if* it was true that this particular paper (Grotendorst, *Cytokine Growth Factor Rev. 8*:171-9 (1997)) does not make activity predictions based on structural relatedness, this fact does not establish that such predictions would not be credible to an artisan in the field. In fact, in another paper Grotendorst does make predictions about members of the CCN family based on their structural relatedness. Grotendorst and Duncan, *FASEB J. 19*:729-38 (2005) (IDS Document AR18). Further, these predictions are consistent with utilities disclosed in the present application, as will be discussed below in section C.

The Examiner also states, "the instant specification fails to correlate a specific function of CTGF-3 with any given module of CTGF-3, or even with the entire protein." Paper No. 20070103, p. 7. The Examiner concludes that "[f]urther experimentation is necessary to attribute a utility to the claimed protein," and that "[u]tilities that require or constitute carrying out further research to identify or reasonably confirm a 'real world' context of use are not substantial utilities." *Id.* Applicants respectfully disagree.

As discussed in detail below, Applicants have in fact asserted specific and substantial utilities for the CTGF-3 protein. The Examiner states, however, that the utilities asserted in the specification are merely employed as the object of further research, and that the specification lacks evidence supporting these utilities. *Id.*

A. Legal Standard for Utility

The U.S.P.T.O. Utility Guidelines require that a claimed invention must possess either a well-established utility or an asserted utility that is specific, substantial and credible. *See,* M.P.E.P. § 2107.02 (Eighth edition, Rev. 5, Aug. 2006). If the claimed invention has a well-established utility that is specific, substantial and credible, utility exists for the invention and a

utility rejection is improper. *See, id.*, § 2107 (II) at 2100-20. If, however, Applicants have asserted a utility for the claimed invention in the specification, the Examiner should determine whether the asserted utility is specific and substantial, and if so, whether such utility is credible to a person of ordinary skill in the art. *Id.*

Applicants further point out that they "need only make *one* credible assertion of specific utility for the claimed invention to satisfy 35 U.S.C. 101 and 35 U.S.C. 112; additional statements of utility, even if not 'credible,' do not render the claimed invention lacking in utility." *Id.*, § 2107.02 (I) at 2100-28 (emphasis added); *see also In re Gottlieb*, 140 U.S.P.Q. 665, 668 (CCPA 1964) ("Having found that the antibiotic is useful for some purpose, it becomes unnecessary to decide whether it is in fact useful for the other purposes 'indicated' in the specification as possibly useful."). In fact, the Federal Circuit has indicated that

> [t]o meet the utility requirement, the Supreme Court has held that a new product or process must be shown to be "operable" - that is, it must be "capable of being used to effect the object proposed." Our cases have not, however, interpreted this language . . . to mean that a patented device must accomplish *all* objectives stated in the specification. On the contrary, "[w]hen a properly claimed invention meets at least one stated objective, utility under § 101 is clearly shown."

Carl Zeiss Stiftung v. Renishaw PLC, 20 U.S.P.Q.2d 1094, 1100 (Fed. Cir. 1991) (citations omitted) (quoting *Raytheon Co. v. Roper Corp.*, 220 U.S.P.Q. 592, 598 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984)).

Finally, the Examiner has the initial burden of challenging an Applicant's presumptively correct assertion of utility in the disclosure. *See, In re Brana*, 51 F.3d 1560, 1566 (Fed. Cir. 1995). To meet that burden, the Examiner must provide evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility. *See, id.* Only after the Examiner has provided such evidence does the burden shift to the Applicant to provide rebuttal evidence "sufficient to convince [a person skilled in the art] of the invention's asserted utility." *Id.*

Applicants respectfully submit that the Examiner has not met his initial burden of demonstrating that a person of ordinary skill in the art would reasonably doubt Applicants' assertions of utility for the currently claimed invention.

B. Applicants' Assertions of Utility

The present specification fully and clearly sets forth utility for the claimed invention.

For example, Applicants have asserted that the claimed invention is useful in the diagnosis and prognosis of various connective tissue related disorders where there is significantly altered expression of CTGF-3. *See,* Specification, p. 31, paragraph 0082. Within the specification, non-limiting examples of diseases or conditions caused by, associated with, or characterized by an over- or under- growth of connective tissue cells are set forth, including cancer, arthritis, fibrosis, atherosclerosis, and osteoporosis. *See, id.* Indeed, the present specification teaches that increased levels of CTGF-3 can be detected in body fluids or tissues from mammals with cancer, fibrosis, arthritis, or atherosclerosis. In particular, the specification states:

> Thus, the invention provides a diagnostic method useful during diagnosis of connective-tissue related disorders, such as cancer, fibrosis, arthritis, or artherosclerosis, which involves assaying the expression level of the gene encoding the connective tissue growth factor-3 protein in mammalian cells or body fluid and comparing the gene expression level with a standard connective tissue growth factor-3 gene expression level, whereby an increase in the gene expression level over the standard is indicative of these diseases.

Specification, p. 31, paragraph 0083.

The utility of the claimed invention for the detection of cancer in particular is also asserted in the specification at page 33, paragraph 0089: "The present invention is useful for detecting cancer in mammals. In particular, the invention is useful during diagnosis of the following types of cancers in mammals: breast, ovarian, cervical, prostate, bone, liver, lung, pancreatic, and splenic."

The specification further discloses that where a connective tissue related disorder has already been diagnosed according to conventional methods, the present invention is useful as a prognostic indicator, whereby patients exhibiting enhanced CTGF-3 gene expression will experience a worse clinical outcome relative to patients expressing the gene at a lower level. *See,* Specification, p. 31, paragraph 0084.

In addition, therapeutic uses for the CTGF-3 protein, as well as antibodies to the CTGF-3 protein, are asserted in the specification, including the treatment of individuals who are in need of an increased or decreased level of CTGF-3. *See,* Specification, pp. 41-48.

It is evident that Applicants have specifically asserted utilities for the claimed invention relating to the detection and treatment of a variety of connective-tissue related disorders associated with an excess or deficiency of CTGF-3 activity. Cancer, fibrosis and fibrotis conditions are connective-tissue related disorders that are explicitly named. Specification, p. 45, paragraph 0129. Indeed, as will be discussed below, experimental results by other groups support the asserted role of CTGF-3 in cancer and in fibrosis.

C. Documents Supporting Applicants' Asserted Utilities

Applicants direct the Examiner's attention to and request consideration of the following documents which provide experimental support for Applicants' originally asserted utility of CTGF-3 in the diagnosis, prognosis, and/or treatment of cancer (although, as will be discussed, they utilized nomenclature different than "CTGF-3"): WO 98/58063 (IDS Document AN1); WO 99/14327 (IDS Document AO1); WO 99/21998 (IDS Document AP1); Pennica *et al., Proc. Natl. Acad. Sci. USA 95*: 14717-14722 (1998) (IDS Document AR7); Saxena *et al., Mol. Cell. Biochem. 228*:99-104 (2001) (IDS Document AR15); Zoubine *et al., Biochem. Biophys. Res. Comm. 282*:421-425 (2001) (IDS Document AS15); Inadera *et al., Biochem. Biophys. Res. Comm. 275*: 108-114 (2000) (IDS Document AS14); and Inadera *et al., Biochem. Biophys. Res. Comm. 294*: 602-608 (2002) (IDS Document AT14); or in the diagnosis, prognosis, and/or treatment of connective tissue-related diseases such as fibrosis and fibrotic conditions: Grotendorst and Duncan, *FASEB J. 19*:729-38 (2005) (***newly cited,*** IDS Document AR18) and Leask and Abraham, *J. Cell. Sci. 119*:4803-10 (December 2006) (***newly cited***, IDS Document AS17).

A nucleotide sequence and corresponding protein identical to CTGF-3, designated GRFLP, is disclosed in AN1. In AN1, it states: "GRFLP is expressed in various libraries derived from cancerous tissues. Therefore, GRFLP appears to play a role in cancer and connective tissue disorders, particularly disorders in which GRFLP is overexpressed." AN1, page 22, lines 28-30.

A nucleotide sequence and corresponding protein identical to CTGF-3, designated PRO261, is disclosed in AO1. In AO1, it was demonstrated that the gene encoding PRO261 was amplified in (1) primary lung tumors, (2) primary colon tumors, (3) colon tumor cell lines, and (4) breast tumor cell lines, relative to normal tissues. AO1, page 70, lines 16-34. In both AP1 and Pennica *et al.*, the nucleotide sequence and corresponding protein identical to CTGF-3, is designated WISP-2. The following results are presented, supporting a utility for CTGF-3 in the diagnosis, prognosis, and treatment of cancer. First, these two documents demonstrate that the gene encoding WISP-2 is localized to a region on chromosome 20q12 that is a frequent site of DNA amplification in human breast and colon cancers. *See,* AP1, page 58, lines 25-28, and Pennica *et al.*, page 14720, column 2, paragraph 1. Second, as in AO1, it is demonstrated in AP1 that the gene encoding WISP-2 was amplified in (1) primary lung tumors, (2) primary colon tumors, (3) colon tumor cell lines, and (4) breast tumor cell lines, relative to normal tissues. *See*, AP1, page 87, line 27, to page 88, line 3. Third, in AP1, it is shown through *in situ* hybridization that there is particularly strong WISP-2 expression in benign fibroblast-like cells adjacent to infiltrating breast carcinoma cells. *See id.*, page 93, lines 3-17. Finally, in Pennica *et al.*, it is shown through quantitative PCR that the copy number of the gene encoding WISP-2 was increased 2-4 fold in 92% of human colon tumors studied. *See,* Pennica *et al.,* at page 14720, right column, 3rd full paragraph. Interestingly, however, despite DNA amplification of WISP-2, mRNA expression was reduced in the majority of colon tumors. *Id.*, page 14722, left column, first full paragraph. Pennica *et al.* concludes that "[t]he amplification and altered expression patterns of the WISPs in human colon tumors may indicate an important role for these genes in tumor development." *Id.*, last paragraph.

Saxena *et al.*, using differential display, RT-PCR, and DNA sequencing analyses in normal human mammary epithelial cells (HMEC) and various breast tumor cell lines including MCF-7, ZR-75, T-47D and SKBR2, demonstrated that WISP-2 genes (corresponding to "CTGF-3") are differentially transcribed in normal and breast tumor cells. WISP-2 mRNA transcription was significantly higher in all 4 tumor derived cell lines, but mRNA expression was undetected or minimally detected in normal breast epithelial cells. Saxena *et al.*, page 103, right column. The Saxena Abstract concludes: "The mRNA expression profiles of WISP genes in normal breast epithelial cells and breast tumor derived cell lines indicated a strong possibility of the involvement of WISP-signaling in the development of human breast tumors, and can be utilized as genetic markers of this disease." Zoubine *et al.* demonstrates that WISP-2 expression was undetectable, or minimally detectable, in normal human mammary epithelial

cells, but was overexpressed in MCF-7 breast cancer cells. Expression of WISP-2 in MCF-7 cells was modulated by serum and correlated with the serum-induced MCF-7 tumor cell proliferation, suggesting that WISP-2 is serum responsive and may be a positive regulator of tumor cell proliferation. *See*, Zoubine *et al.*, Abstract, and page 425, last paragraph.

Inadera *et al.* (2000) presents results on WISP-2 in connection with their search for novel estrogen-responsive genes. Serial analysis of gene expression (SAGE) for estrogen-treated MCF-7 human breast cancer cells was performed. SAGE analysis of 31,000 and 30,856 tags from non-treated and 17 beta-estradiol (E2)-treated cells for 24 hours, respectively, facilitated the identification of 15,037 different transcripts. Comparison of these two SAGE libraries indicated a remarkable similarity in expression profiles. Among the identified transcripts, four genes were found to be markedly increased for E2-treated cells compared with control cells. Three of the transcripts were known estrogen-inducible genes. The fourth gene was WISP-2, which the authors state has recently been reported as an up-regulated gene in the mammary epithelial cell line C57 MG transformed by the Wnt-1 oncogene. *See*, Inadera *et al.* (2000) Abstract. The increase in WISP-2 mRNA was completely prevented by co-incubation with a pure anti-estrogen ICI 182,780, but not by coincubation with cycloheximide, indicating that WISP-2 is directly regulated by the estrogen receptor. The WISP-2 gene was also induced by treating with environmental estrogens. This study represents the first comprehensive gene expression analysis of estrogen-treated human breast cancer cells. Thus, WISP-2 was identified as a novel estrogen responsive gene in human breast cancer cells and this effect is directly regulated by an estrogen receptor. *Id.*, page 114, last paragraph.

In a subsequent paper, Inadera *et al.* (2002) examined whether WISP-2 could be utilized as a marker for screening environmentally relevant compounds for estrogenicity. In MCF-7 cells, progesterone, dexamethasone, tri-iodothyronine, and 2,3,7,8-tetrachlorodibenzo-p-dioxin did not regulate the expression of WISP-2, indicating that its induction is highly specific for hormones that interact with the estrogen receptor. Western blot analysis detected WISP-2 protein induced by 17-beta-estradiol (E2), not only in the cell lysates but also in the culture supernatant of exposed cells, indicating that WISP-2 was a secreted protein. The induction of WISP-2 protein by E2 in the culture supernatant was dose-dependent with estimated EC(50) levels between 10 and 100 pM. These results demonstrated the capacity to screen environmental compounds for estrogenicity via WISP-2 induction.

In a more recent paper, Grotendorst and Duncan characterized the CTGF-1 domains and localized two connective-tissue promoting activities to the two halves of the protein. AR18 (published in 2005), abstract. For example, they determined that the myofibrobroblast differentiation and collagen synthesis activity of CTGF-1 lies in the N-terminal domain. *Id.* They also state that "[t]he high degree of sequence conservation in the various CCN family members suggests a *commonality of function* in these different gene products." *Id.*, p. 731, col. 2 (emphasis added). Specifically regarding CTGF-3 (Cop-1/Wisp-2), they state "[b]ased on the CTGF data presented here, it would be predicted that these peptides could only act as differentiation-inducing factors and would be incapable of stimulating proliferation." *Id.*, p. 735, col. 2 and p. 737, col. 1. Since the differentiation- and collagen synthesis- inducing activity of CTGF-1 is one of its key activities in regulating connective tissue formation, *id.*, p. 736, col. 2, this prediction in AR18 that CTGF-3 has similar activity to the N-terminal domain of CTGF-1 is consistent with the connective tissue-related utilities disclosed by Applicants for CTGF-3. *See also*, AS17 (published in December 2006), p. 4803 ("CCN family members . . . are overexpressed in *pathological conditions that affect connective tissues*, including scarring, *fibrosis and cancer*." (emphasis added)).

Clearly, the numerous publications discussed above support and substantiate Applicants' assertion of CTGF-3's utility in the diagnosis, prognosis, and/or treatment of connective tissue-related diseases such as cancer, and in particular, human breast cancer, and fibrosis. The fact that artisans, as recently as 2005 and December 2006, continue to support Applicants' asserted utilities should reassure the Examiner of the credibility and accuracy of these utilities.

D. Compliance with the Utility Guidelines

Regarding the specificity of an asserted use, Applicants note that the Utility Guidelines define "specific utility" as a utility that

> is *specific* to the subject matter claimed and can "provide a well-defined and particular benefit to the public." This contrasts with a *general* utility that would be applicable to the broad class of the invention. . . . A general statement of diagnostic utility, such as diagnosing an unspecified disease, would ordinarily be insufficient absent a disclosure of what condition can be diagnosed.

M.P.E.P. § 2107.01 (I)(A) at 2100-22 to 2100-23 (citations omitted).

Applicants assert that the specification does not provide "[a] general statement of diagnostic utility, such as diagnosing an unspecified disease." Rather, in view of Applicants' assertions in the specification that CTGF-3 is useful in the diagnosis of cancer, coupled with the fact that the CTGF-3 gene was consistently found to be overexpressed in human breast cancer cells and that artisans, as recently as 2005 and December 2006, predicted that CCN family members including CTGF-3 have activity important in connective-tissue formation (thus confirming and supporting Applicants' assertions), Applicants submit that the claimed invention possesses diagnostic and/or prognostic utility in a specified disease state, *i.e.*, cancer, such as breast cancer, and fibrosis. Accordingly, since there is "a disclosure of what condition can be diagnosed," it follows that the statement of diagnostic/prognostic utility is clearly sufficient under the Utility Guidelines.

Applicants also note that the Utility Guidelines define "substantial utility" as a utility that

> defines a "real world" use. Utilities that require or constitute carrying out further research to identify or reasonably confirm a "real world" context of use are not substantial utilities . . . An assay that measures the presence of a material which has a stated correlation to a predisposition to the onset of a particular disease condition would also define a "real world" context of use in identifying potential candidates for preventive measures or further monitoring.

M.P.E.P. § 2107.01 (I)(B) at 2100-23.

As noted above, Applicants have asserted that CTGF-3 can be overexpressed in cancer and other connective-tissue related conditions (Specification, page 31, paragraph 0083), and have disclosed assays that measure the presence of CTGF-3 in a biological sample (*id.*, paragraphs 0086-0098). Thus, not only would such assays have utility in diagnosing connective-tissue related conditions such as cancer and fibrosis, but also in further monitoring clinical outcome, *i.e.*, in prognosis. Clearly, these are substantial "real world" utilities. Thus, similar to the "specific" prong, Applicants' asserted utility therefore clearly satisfies the "substantial" prong of the Utility Guidelines.

Regarding the credibility of an asserted utility, the Utility Guidelines provide as follows:

> Where an applicant has specifically asserted that an invention has particular utility, that assertion cannot simply be dismissed by Office personnel as being "wrong," even when there

> may be reason to believe that the assertion is not entirely accurate. Rather, Office personnel must determine if the assertion of utility is credible (i.e., whether the assertion of utility is believable to a person of ordinary skill in the art based on the totality of evidence and reasoning provided).

M.P.E.P. § 2107.02 (III)(B) at 2100-31. In other words, the Examiner "must provide evidence sufficient to show that the statement of asserted utility would be considered 'false' by a person of ordinary skill in the art." M.P.E.P. § 2107.02 (III)(A) at 2100-31. Applicants respectfully submit that the Examiner has not met this burden.

Applicants re-emphasize that they need only make *one* credible assertion of specific utility for the claimed invention to satisfy the utility requirements, and that once the claimed invention has been found to be useful for some purpose, it becomes unnecessary to decide whether it is in fact useful for the other purposes indicated in the specification as possibly useful. *See, Carl Zeiss Stiftung v. Renishaw plc*, 20 U.S.P.Q.2d 1094, 1100 (Fed. Cir. 1991); *In re Gottlieb*, 140 U.S.P.Q. 665, 668 (CCPA 1964); M.P.E.P. § 2107.02 (I) at 2100-37.

Applicants have asserted in the specification that the claimed invention can be used in the diagnosis, prognosis, or treatment of connective tissues related conditions such as cancer and fibrosis, and have provided "evidence" in the form of publications to substantiate these assertions and provide evidence as to the accuracy, *i.e.*, credibility, of these assertions. Thus, Applicants submit that the above assertions are not only specific and substantial, but credible as well, *i.e.,* the assertion is *at least believable* to, and would not be considered *false* by, a person of ordinary skill in the art. The Examiner has not provided any evidence showing that one of ordinary skill in the art would reasonably doubt these asserted utilities. Thus, a *prima facie* case of lack of utility has not been established.

E. Conclusion: The Utility Requirement Has Been Satisfied

In view of the above, Applicants assert that the utilities assigned to the claimed invention are specific, substantial and credible. Even assuming, *arguendo*, the Examiner had established a *prima facie* showing that the claimed invention lacks utility, Applicants respectfully submit that the numerous publications cited herewith (*i.e.*, the evidence of record) would be sufficient to lead one skilled in the art to conclude that the asserted utility would not be considered "false" by a person of ordinary skill in the art, and therefore would be sufficient to rebut the Examiner's

showing. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 101.

V. Rejection Under 35 U.S.C. § 112, First Paragraph - How to Use Requirement

At page 8 of Paper No. 20070103, the Examiner rejected claims 24-39 under 35 U.S.C. § 112, first paragraph. In the Examiner's opinion, the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility, and therefore "one skilled in the art clearly would not know how to use the claimed invention." Paper No. 20070103, p. 8. Applicants respectfully traverse this rejection.

For the reasons discussed above in response to the rejection under 35 U.S.C. § 101, as well as the art cited therein, Applicants assert that the claimed invention complies with the current case law and is supported by a specific, substantial and credible utility as well. The Examiner "should not impose a 35 U.S.C. 112, first paragraph, rejection grounded on a 'lack of utility' basis unless a 35 U.S.C. 101 rejection is proper." M.P.E.P. § 2107.01 (IV) at 2100-27. Therefore, since the claimed invention complies with the utility requirement of 35 U.S.C. § 101, the rejection under 35 U.S.C. § 112, first paragraph, based on the alleged lack of utility of the claimed invention, should be withdrawn.

In view of the above remarks, Applicants believe the pending application is in condition for allowance.

Dated: April 11, 2007

Respectfully submitted,

By _____

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Ebner et al.	Docket No.: PF319C2
Application No.: 10/721,336	Confirmation No.: 3162
Filed: November 26, 2003	Art Unit: 1647
For: Connective Tissue Growth Factor (CTGF-3)	Examiner: D. S. Romeo

Statement Concerning the ATCC Deposit

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

As an attorney of record in the present application, I, Mark J. Hyman, hereby give the following assurance by signature below:

1. Human Genome Sciences, Inc., the assignee of the present application, has deposited biological material under the terms of the Budapest Treaty on the International Recognition of the Deposit of Micro-organisms for the Purposes of Patent Procedure with the following International Depository Authority: American Type Culture Collection (ATCC), Patent Depository, 10801 University Boulevard, Manassas, Virginia 20110-2209 (present address). The deposit was made on October 10, 1996, and given ATCC Accession Number 97756. A copy of the ATCC Deposit Receipt for Accession Number 97756 is attached herewith.

2. In accordance with M.P.E.P. § 2410.01 and 37 C.F.R. § 1.808, assurance is hereby given that all restrictions on the availability to the public of ATCC Accession Number 97756 will be irrevocably removed upon the grant of a patent based on the instant application, except as permitted under 37 C.F.R. § 1.808(b).

Dated: April 11, 2007

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American Type Culture Collection

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BUDAPEST TREATY ON THE INTERNATIONAL RECOGNITION OF
THE DEPOSIT OF MICROORGANISMS FOR THE PURPOSES OF PATENT PROCEDURE

INTERNATIONAL FORM

RECEIPT IN THE CASE OF AN ORIGINAL DEPOSIT ISSUED PURSUANT TO RULE 7.3
AND VIABILITY STATEMENT ISSUED PURSUANT TO RULE 10.2

To: (Name and Address of Depositor or Attorney)

Human Genome Sciences, Inc.
Attn: Robert H. Benson
9710 Key West Avenue
Rockville, MD 20850

Deposited on Behalf of: Human Genome Sciences, Inc. (Docket PF319)

Identification Reference by Depositor:	**ATCC Designation**
DNA Plasmid, HOEB639	97756

The deposit was accompanied by: ___ a scientific description _ a proposed taxonomic description indicated above.

The deposit was received October 10, 1996 by this International Depository Authority and has been accepted.

AT YOUR REQUEST: X We will inform you of requests for the strain for 30 years.

The strain will be made available if a patent office signatory to the Budapest Treaty certifies one's right to receive, or if a U.S. Patent is issued citing the strain, and ATCC is instructed by the United States Patent & Trademark Office or the depositor to release said strain.

If the culture should die or be destroyed during the effective term of the deposit, it shall be your responsibility to replace it with living culture of the same.

The strain will be maintained for a period of at least 30 years from date of deposit, or five years after the most recent request for a sample, whichever is longer. The United States and many other countries are signatory to the Budapest Treaty.

The viability of the culture cited above was tested October 17, 1996. On that date, the culture was viable.

International Depository Authority: American Type Culture Collection, Rockville, Md. 20852 USA

Signature of person having authority to represent ATCC:

Barbara M. Hailey

Barbara M. Hailey, Administrator, Patent Depository

Date: October 19, 1996